**IN THE CLAIMS:**

1. (Amended) A micromachined single-crystalline silicon micro-gyroscope, comprising:

a plurality of structural elements requiring electrical isolation; and

an oxide/polysilicon/metal triple layer for electrical isolation in which the polysilicon layer is partially etched to accomplish the electrical isolation in the microstructure of the micro-gyroscope.

Claims 2 through 12 (Deleted)

13. (Newly Added) The micro-gyroscope of claim 1 having electrodes which are electrically connected to the structural elements and, thus drive the structural elements or receive the signals from the structural elements in the micro-gyroscope.

14. (Newly Added) The micro-gyroscope of claim 1 wherein the structural elements requiring electrical isolation in the micro-gyroscope are springs for driving, springs for sensing, driving combs, sensing combs, and combs for sensing driving.

15. (Newly Added) The micro-gyroscope of claim 14 wherein the width of the spring and spring constant are determined by the deposition depths of the oxide layer and the polysilicon layer, and thereby the resonant frequency of the micro-gyroscope is determined.

16. (Newly Added) The micro-gyroscope of claim 14 wherein the micro-gyroscope is a decoupled type, in which a driving electrode and a sensing electrode are electrically isolated by the polysilicon layer partially etched on the boundary between the structural elements requiring electrical isolation in the microstructure of the micro-gyroscope.

17. (Newly Added) The micro-gyroscope of claim 14 wherein the springs for driving and the springs for sensing are aligned with each other at a 90° angle.

18. (Newly Added) The micro-gyroscope of claim 17 wherein each of the springs for driving and springs for sensing has a node with a hole in the middle.

19. (Newly Added) The micro-gyroscope of claim 18 wherein the opening width of the each hole is larger than the width of the spring.

20. (Newly Added) The micro-gyroscope of claim 14 wherein silicon is used as a support substrate, and wherein the moving microstructure of the micro-gyroscope and the silicon substrate is grounded and the sensing electrode is connected to a negative input of two charge amplifiers.

21. (Newly Added) The micro-gyroscope of claim 20 wherein a tuning voltage is applied to the positive input terminals of the charge amplifiers, and angular rate is obtained by demodulating the output signal of a high pass filter to remove the tuning voltage.

22. (Newly Added) The micro-gyroscope of claim 1 wherein the polysilicon layer is partially etched on the boundary between the structural elements requiring electrical isolation in the microstructure of the micro-gyroscope.

23. (Newly Added) The micro-gyroscope of claim 1 wherein the metal layer in the triple layer is formed at the top surface and the upper sidewall in the micro-gyroscope.

24. (Newly Added) The micro-gyroscope of claim 14 wherein the vertical depth of both of the driving electrode and the sensing electrode is larger than 10 .

25. (Newly Added) The micro-gyroscope of claim 1 wherein the oxide layer and the polysilicon layer have a good step coverage, and the metal layer has a poor step coverage, and wherein heavily doped polycrystalline silicon is used as the polysilicon layer.

26. (Newly Added) A method for fabricating the micro-gyroscope comprising electrical isolation steps of:

(a) oxidating the whole surface of the micro-gyroscope structure of single-crystalline silicon to form an insulation layer;

(b) depositing doped polysilicon uniformly on the whole insulation layer formed in the step (a) to form a polysilicon layer;

(c) sputtering or evaporating metal which has a poor step coverage on top side and upper sidewall of the micro-gyroscope structure to form a metal layer; and

(d) etching away the polysilicon layer on the boundary between the structural elements requiring electrical isolation each other in the microstructure of the micro-gyroscope in order to electrically isolate the elements which should be electrically isolated each other.

27. (Newly Added) The method for fabricating the micro-gyroscope of claim 26 wherein the micro-gyroscope comprises electrodes which are electrically connected to the structural elements and, thus drive the structural elements or receive the signal from the structural elements in the micro-gyroscope.

28. (Newly Added) The method for fabricating the micro-gyroscope of claim 26 wherein the structural elements requiring electrical isolation in the micro-gyroscope are springs for driving, springs for sensing, driving combs, sensing combs, and combs for sensing driving.

29. (Newly Added) The method for fabricating the micro-gyroscope of claim 26 wherein the metal layer serves as electrodes.

30. (Newly Added) The method for fabricating the micro-gyroscope of claim 26 wherein the metal layer serves as a mask in the step 26(d).

31. (Newly Added) The method for fabricating the micro-gyroscope of claim 30 wherein the polysilicon in the bottom of the micro-gyroscope structure is partially etched away in the step 26(d).

32. (Newly Added) The micro-gyroscope of Claim 16 wherein the vertical depth of both of the driving electrode and the sensing electrode is larger than 10$\mu$m.